BOTANY.

Cæoma nitens.—The development of *Cæoma nitens* has recently been studied by Mr. H. M. Richards, and the results published in an interesting paper in the Proceedings of the American Academy of Arts and Sciences. The particular question investigated was whether or not the spermogonia are developed within the cavities of the epidermal cells of the host. By means of carefully made sections, Mr. Richards demonstrates that they arise as masses of hyphæ which push up *between* the epidermal cells, and that later the walls of some of these cells become absorbed. The spermogonia are therefore at first intercellular, but by the absorption of the walls they become intracellular.

CHARLES E. BESSEY.

Our Naiads.—Thomas Morong's monograph "The Naiadaceæ of North America" has been brought out in the *Memoirs of the Torrey Botanical Club.* It contains descriptions and plates of 54 species distributed as follows: *Triglochin,* 3 species; *Scheuchzeria,* 1; *Lilæa,* 1; *Potamogeton,* 37; *Ruppia,* 2; *Zannichellia,* 1; *Naias,* 4; *Zostera,* 3; *Phyllospadix,* 2. Among these we find one new species *Potamogeton faxoni* from Lake Champlain, and several new varieties of previously described species. Quite a number of changes have been made in the nomenclature of the species.

Thus comparing Dr. Morong's list with that in the 6th edition of Gray's "Manual," we note the following changes: *Potamogeton pennsylvanicus* Cham. and Sch. becomes *P. nuttallii* Cham. and Sch., since the latter was described on an earlier page of *Linnæa* than the former (II. 1827); *P. hybridus* Mx. (1803) being preoccupied (by Thuillier in 1790), gives way to *P. diversifolius* Raf. (1808); *P. rufescens* Schrad. (1815) is antedated by *P. alpinus* Balbis (1804); *P. fluitans* Roth. (1788), gives way to *P. lonchites* Tuck. (1848), inasmuch as it is highly improbable that the European and American species are identical; *P. zizii* Mert. and Koch. of the "Manual" appears to have included two species which are now to be known as *P. spathulæformis* (Robbins) Morong, (*P. gramineus,* var. (?) *spathulæformis* Robbins, *P. spathæformis* Tuck., and *P. varians* Morong), and *P. angustifolius* Berch. and Presl. (*P. lucens,* var. *minor* Nolte); the var. *lanceolatus* Robbins (1867) of *P. perfoliatus L.* being preoccupied by Blytt (1861) must give way to var. *richardsonii* Ar. Bennett (1889); *P. pauciflorus* Pursh. (1814) must be replaced by *P. foliosus* Raf. (1808); *P. mucron-*

atus Schrader, being uncertain, the species is to bear the name of *P. major* (Fries) Morong; *P. tuckermani* Robbins (1856) gives way to the earlier *P. confervoides* Reichb.; *P. marinus* L. turns out not to be that species, and must take the name *P. filiformis* Pers. (1805).

CHARLES E. BESSEY.

Hough's American Woods.—The third part of R. B. Hough's "American Woods" has recently been distributed. The twenty-five species in this part are *Magnolia glauca, Ilex opaca, Acer rubrum, A. negundo, Prunus pennsylvanica, P. avium, Pyrus communis, Cratægus punctata, Amelanchier canadensis, Liquidamber, styraciflua, Diospyros virginiana, Fraxinus sambucifolia, Morus rubra, Hicoria sulcata* (*Carya sulcata*), *H. glabra* (*Carya porcina*), *Quercus bicolor, Q. prinus, Q. muhlenbergii, Q. coccinea, Betula populifolia, Salix amygdaloides, Populus tremuloides, P. dilatata, Chamœcyparis thyoides, Pinus mitis.*

Each species is represented by three sections of the wood, transverse, radial and tangential, each 4½ by 2 inches. A good descriptive text accompanies the set of specimens. The parts are sold by the author at Lowville, N. Y., for the low price of five dollars each.

CHARLES E. BESSEY.

Allen's Characeæ of America.—Five years ago Dr. T. F. Allen of New York City brought out Part I of a promising work on the Characeæ of America, consisting of an introductory chapter on the structure, followed by the keys to the species of all our genera. He has now brought out the first fascicle of Part II in which he begins the work of carefully describing and illustrating every species. The illustrations are ample, there being no less than fourteen plates for the eight species of *Nitella* included. The descriptions are full and apparently well drawn up, measurements being fully given. The following are the species described:

N. opaca Ag.—New England and Canada to California and Mexico.

N. obtusa Allen.—A new species from Lake Tamiscouata, Canada.

N. montana Allen.—A new species from Montana.

N. blankinshipii Allen.—A new species from Missouri.

N. missouriensis Allen.—A new species from Missouri.

N. flexilis Ag.—Across the continent.

N. subglomerata A. Br.—N. Y. and N. J. to Oregon, Texas and Missouri and the var. *brachyteles* A. Br. of this species occurs in Mexico Alabama.

N. glomerulifera A. Br.—Mass. to N. J., Ohio and Louisiana.

Every botanist will hope for the early appearance of the succeeding fascicles.

CHARLES E. BESSEY.